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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,683

10/19/2004

Noboru Yamamoto

121552

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EXAMINER

NGUYEN, THUONG

ART UNIT

PAPER NUMBER

2155

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/511,683	YAMAMOTO, NOBORU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thuong (Tina) T. Nguyen	2155	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-9, 11 is/are rejected.
- 7) ☒ Claim(s) 5-9, 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

1. This action is in response to application 10/511,683 filed 2/5/08. Claims 5-9, & 11 are pending and represent method for parallel merge/sort processing device, method, and program for sorting data strings.

***Claim Objections***

2. Claims 8-9 objected to under 37 CFR 1.75(c) as being in improper form because claims 8 & 9 depend on claim 7 on multiple locations in the claim limitation, Claims 8 & 9 should only depends on claim 7 in the preamble. See MPEP § 608.01(n).

Accordingly, the claims 8-9 not been further treated on the merits.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention of the claim 11 is directed to non-statutory subject matter. Claim 11 recited "A program for performing parallel: " which are adapted to perform some steps.

The computer program and the program are non-statutory as not being tangible embodied in computer readable medium in a manner so as to be executable, and also claimed that the computer program/programming execute in a computer or by a

computer are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer (See MPEP section 2106, Seventh Edition, Revision No. dated February 2000, at page 2100-10 and 2100-11).

Other dependent claims, which are not specifically cited above are also rejected because of the deficiencies of their respective parent claims.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5 & 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It's unclear to the examiner what is the output of a third step should be, should it be in descending order or ascending order?

7. Claims 5 & 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It's unclear to the examiner what is the output of seventh step? What is the output of the invention?

8. Claims 5 & 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It's unclear to the examiner what is the job information and what is job information does?

9. Claims 5 & 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It's unclear to the examiner what does it means by assigning a processor group for sorting? Does it means the whole group of processor assigned for sorting to the acquire job?

***Allowable Subject Matter***

10. Claims 5-9 & 11 are objected to be allowable if corrected those errors stated in the previous paragraphs.

11. The following is an examiner's statement of reasons for objected the claims :

In interpreting the claims, in light of the specification filed on 10/19/04, the Examiner finds the claimed invention to be patentably distinct form the prior art of record.

12. Fushimi et al. (US 5,903,780), teach data sorting device having multi-input comparator comparing data input from latch register and key value storage devices wherein parallel processors for sorting that includes a plurality of processors for executing data strings (abstract; col 1, lines 7-16 & 38-43).

13. Huang et al. (US 5,721,957), teach method and system for storing data in cache and retrieving data from cache in a selected one of multiple data formats, wherein dividing data string pairs for sub-dividing tow sorted data (abstract; figure 3).

Art Unit: 2155

14. The following is an examiner's statement of reasons for objected the claims to be allowed:

The examiner has found that the prior art of record does not appear to teach or suggest or render obvious the claimed limitations in combination with the specific added limitations as recited in dependent claims. The prior art of record fails to teach or suggest individually or in combination of divide a sorted data string pair into sets of two-division operations in which total of the number of data counted and dividing a data string and acquiring a plurality of unsorted data strings and assigning a processor to said plurality of partial data and applying a quicksort method to the assigned processor based on arbitrary algorithm and creating an input data string pair which were acquired in the third step and repeating said step using the merge-processed sorted partial data string . Claims 5-9, & 11 are object to be allowed because of the combination of other limitations and the limitation listed above.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina Nguyen whose telephone number is 571-272-3864, and the fax number is 571-273-3864. The examiner can normally be reached on 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuong (Tina) Nguyen  
Patent Examiner/Art Unit 2155

/saleh najjar/

Supervisory Patent Examiner, Art Unit 2155